A RETROSPECTIVE ANALYSIS OF THE GENERAL MOTORS AIR CUSHION RESTRAINT SYSTEM MARKETING EFFORT, 1974 TO 1976

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EXECUTIVE SUMMARY

OBJECTIVE

- To support NHTSA's current air bag demonstration program by reexamining General Motors' unsuccessful air bag marketing effort in the mid-1970s
  - First, to understand why the GM effort failed
  - Second, to determine whether the GM effort offers a basis for developing improved marketing and merchandising strategies

APPROACH

- This retrospective analysis is based on three data sources
  - Documents relating to the air cushion restraint system (ACRS) program, largely but not exclusively supplied by GM
  - Interviews with GM dealers active during the ACRS period
  - Group depth interviews with consumers who bought GM cars on which ACRS was available

BACKGROUND

- GM offered ACRS as an option on full-size (Band C Body) Buicks, Cadillacs and Oldsmobiles, and on personal luxury coupes (E Body) from the same divisions during model years (MY) 1974, 1975 and 1976
- Only 10,243 ACRS cars were built out of a production capacity of 100,000 per year
- Average installation rate was less than half a percent based on over two million cars on which the option was potentially available during the three-year marketing period
- ACRS build was uneven by division
  - Few ACRS Buicks built after MY74
  - Oldsmobile built more ACRS cars than the other two divisions combined

- Although GM's 1974 cars were introduced in mid-September, 1973 ACRS cars were not available until January 1974

- ACRS price ranged from $225 in MY74 to $315 in MY76

  - Dealer markups were comparable to those on other options

  - ACRS was one of the more expensive options, costing more than six-way power seats and AM-FM stereo radios, but less than air conditioning and electric sunroofs

GM'S APPROACH TO ACRS MARKETING

- GM promoted ACRS as a comfort and convenience option, stressing that it would eliminate the then-required seat belt-starter interlock

- Major promotional tools were:

  - A full-color, multipage brochure on ACRS

  - A ten-minute videotape on ACRS for dealer "mini-theaters"

  - One full-page print ad appearing in 21 major markets and 5 national publications

- With one exception, GM's major market research efforts on ACRS occurred after the corporation had decided to cease marketing the option

  - Pre-ACRS market research findings support the comfort and convenience positioning

  - There was apparently no use of market research to develop modified marketing or merchandising approaches

- GM treated the ACRS program as a means of building an experience base as well as a source of revenue

  - Mixed motivation may have led to perceptions of lack of commitment to air bags

DEALER EXPERIENCE

- Thirteen dealer interviews were built around a short list of relatively successful (two dozen or more sold) ACRS dealers

- Some dealers in the same cities with few or no ACRS sales were interviewed as a control group

- Information was most often provided by a principal in the dealership, occasionally by sales personnel active in the mid-70s

- Many of the top-selling ACRS dealers took losses on their air bag cars

- Those who recall the ACRS experience as a positive one share a commitment to air bags, with varying bases:

  - A belief that they will generate additional revenue

  - A conviction that they provide superior protection or comfort

- Dealers with minimal ACRS sales or profit tended to share consumer uncertainties about the system

- Perceived level of GM's support for dealers varied but appeared unrelated to dealer success or failure

- Major consumer objections, as seen by dealers, were:

  - Unavailability of tilt steering wheel with ACRS

    - Tilt wheel installation rates ranged from 50% to 70% at that time

  - Fear of premature or accidental air bag deployment

    - Belief that a bump or "tap" from another car will cause inflation

  - Lack of visible function

    - No way to dramatize bag's effectiveness on a demonstrator

    - No reassurance that bag will work when needed

    - No opportunity to exploit status or novelty value as a selling appeal

  - Price and post-crash repairing cost

    - Dealers report considerable price sensitivity

    - Post-crash repair costs, in both time and money, concerned many

- Major dealer objections were:

  - Price

    - Some difficulty in financing leases

  - Risk of losing sales

    - Fears of malfunctioning bags disrupting repeat customer relationships

  - Delivery

    - Salespeople reluctant to wait extended length of time required for delivery and payment of commission

  - Cost of carrying demonstrators, reluctance of mechanics to work on systems emerged less often as objections

- Many dealers spontaneously compared air bags to current difficulties with selling diesels; few would willingly stock them again

- Similar dealer concerns emerged in an informal survey of Detroit-area dealers carried out by GM during the ACRS sales period

CONSUMER ATTITUDES

- Two group depth interviews were carried out in New York and Los Angeles with original owners of full-size MY74-76 Buicks, Cadillacs and Oldsmobiles

  - Both groups probed recollection of ACRS availability and present-day attitudes toward air bags

  - NY group reacted to GM color brochure and videotape as used in mid-1970s

- No one recalled being told about ACRS, reading about it, or seeing the mini-theater tape on it

- Overall attitudes toward bags are generally positive, but accompanied by considerable lack of information and questions about how they work

- Major concerns included:
  - Circumstances under which bags will deploy
  - Fear of loss of forward vision or loss of vehicle control during a deployment
  - Assurance of continued operability as car ages; system check light does not provide such assurance for many
  - Price
- GM brochure and film left some questions unanswered, but elicited more positive reaction to ACRS

GM MARKET RESEARCH

- Two GM market surveys studied the ACRS purchase/rejection process
  - ACRS national consumer research study (May 1975), sampling 462 non-ACRS Oldsmobile owners and 13 ACRS owners
  - Passive occupant restraint study (December 1976), sampling 304 non-ACRS owners and 323 ACRS owners
- Studies confirm limited consumer knowledge about, and trust in ACRS, as well as price sensitivity
- Prepurchase awareness of ACRS was mixed (1975 study), with a quarter "Very much" aware that ACRS was available, and a third "Not at all" aware
- Both studies show that in about half of ACRS purchases, the presence of ACRS was not a positive influence; consistent with dealer reports of "giving away" the bags to sell the car

WHY IT FAILED

- Charges that GM research found "an overwhelming demand for air bags" fail to take into account evidence of consumer price sensitivity
- GM's analysis stresses the drop in large-car sales due to the energy crisis and the depressed state of the economy

- Yet even granting limited big-car sales, the ACRS installation rate never exceeded 1% on those cars which were sold

- In spite of a depressed economy, installation rates of popular options advanced during the ACRS sales period

- Major impact of large car glut was probably on dealer incentive to reduce inventory rather than special order ACRS cars

● We see three handicaps which resulted in miniscule ACRS sales

- Lack of dealer commitment

  . Initial dealer attitude strongly linked to ACRS sales performance

- Unanticipated consumer concerns

  . GM's pre-ACRS research concentrated on assessing air bags against passive belts, rather than probing air bag attitudes in great depth

  . No evidence of research to position air bags, diagnose consumer concerns with concept, or pre-test marketing materials

  . As a result, GM was not able to effectively address consumer doubts, particularly the safety concerns which this safety device elicits from many, and was not able to create a perception of benefit to balance against this option's cost

- Installation on full-size vehicles

  . GM research indicates that owners of smaller cars are more receptive to air bags

RECOMMENDATIONS

● Major prerequisite to marketing air bags is to allay consumer fears and doubts which permit the system to be dismissed as not providing benefit commensurate with cost

- Requires intensive diagnostic research with consumers to uncover these concerns

  - Requires pretesting promotional materials to assess their effectiveness in addressing these concerns

- Development of an air bag marketing strategy requires identification of target markets, and the appeals to which those markets will be responsive. Possible target markets include:

  - Timid drivers

  - Early adopters

  - Hi-tech gadgeteers

- Relative credibility of various information sources on air bags needs to be assessed

- Special attention should be given to ways of communicating role of insurance coverage in post-crash repairing

- Initial qualitative consumer research followed up by a panel survey to identify target segments and pretest materials is suggested

- Technical and design work is indicated in some areas in addition to marketing activities

  - Development of an air bag system compatible with tilt and telescoping steering wheel

  - Dramatization of the presence of the air bags

    . Will provide status and novelty value to consumers

    . Will enhance the value of air bag demonstrators to dealers

  - Provision of more credible verification of the system's readiness to function

- Research on dealer attitudes and needs should guide dealer support activities and promotion to dealers

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I. INTRODUCTION

The National Highway Traffic Safety Administration is currently sponsoring, with the General Services Administration (GSA), an air bag demonstration program. In addition to the government ordering air bag-equipped cars for the GSA motor pool, the demonstration program will also provide an opportunity for consumers to purchase air bag-equipped cars. Through this demonstration program, it is hoped that consumer knowledge of the benefits of air bags will increase and that demand for air bag-equipped cars will be stimulated.

The U.S. automotive industry provides only one example of an attempt to market air bags. This is the Air Cushion Restraint System (ACRS) option offered by General Motors from 1974 through 1976 on Cadillac De Ville and Eldorado models, Buick Electra, LeSabre and Riviera models, and Oldsmobile 88, 98 and Toronado models.

The airbag marketing effort was not particularly successful, with only 10,243 ACRS cars built and sold over a three-year period, as against a production capacity of 100,000 a year.

In anticipation of this demonstration program to offer some air bag-equipped cars to the public, NHTSA needs to understand the factors involved in the poor showing of ACRS, particularly insofar as they may suggest marketing appeals or techniques which could help make a current offering of air bags more successful.

The purpose of this project, then, is to re-examine the GM marketing effort of the mid-1970s to try to determine what went wrong, and whether any or all of the factors which limited GM's sales can be corrected or overcome in future marketing efforts. More specifically, NHTSA needs to know what kind of information base an air bag marketer should have in order to effectively plan and implement his marketing efforts.

General Motors Corporation inevitably becomes a target for close scrutiny in this effort, by virtue of having been the only automaker to take the risk of bringing this innovative safety technology to market. The intent of this project is not to pass judgment on GM's efforts, but to learn from them. If, in retrospect, it can be shown that GM made mistakes in marketing ACRS, no stigma or reproach should be attached; it is far easier to analyze the ACRS program in leisure, several years later than to have developed and implemented a marketing program for the very

first commercial appearance of air bags in the United States.

The actual steps involved in this retrospective analysis were three:

- First, a file of market research and other material, some provided by GM, some from other sources, was reviewed in order to provide a general orientation to the scope of the ACRS effort, GM's marketing strategy for the option, and the consumer information available to GM on which that strategy was based. This information was supplemented with background interviews with industry observers both in and out of government.

- Primary data collection concentrated on interviews with General Motors dealers, sales managers and sales personnel active during the ACRS period in order to determine the system's assets and liabilities from the dealer point of view.

- Additional data was secured from two group depth interviews of consumers who had purchased GM models during that period which could have been (but were not) equipped with the Air Cushion Restraint System.

This report integrates the results of these three activities in order to arrive at some conclusions about the key factors responsible for GM's disappointing sales record, and some recommendations for future marketing efforts. Both the analysis and recommendations concentrate heavily on the author's profession of market research, although other aspects of automotive marketing have not been neglected.

The reader is cautioned that even an event as recent as nine years ago can become distorted in people's recollections, and can leave an incomplete trail of statistics, publications and other guideposts which might assist the analyst in coming to terms with what actually happened. In the following pages, then, is the ACRS program viewed from 1983; probably not too different from what it would have looked like in 1977, but probably not identical either.

II. BACKGROUND

This chapter provides some background on the ACRS build, in order to provide a context for understanding and evaluating what appears in the following chapters. Much of what follows is based on an analysis of materials provided to NHTSA by General Motors; where gaps exist, or other sources were used, this will be pointed out.

A. Facts and Figures

Basic build and sales figures on the ACRS cars were not easy to come by. During MY74, David Martin, then GM's Manager of Automotive Safety Engineering, reported monthly on these figures to NHTSA; GM has also provided total build figures, but there are ambiguities about how the build divided between MY75 and MY76 by division. What does seem clear is that the MY76 ACRS build was miniscule, probably to use up inventory on hand; the decision to terminate the ACRS option was made in the spring of 1975, well before MY76 production began.

Table 2-1 presents the most certain figures on ACRS production, together with production figures for those vehicles which were potential ACRS cars -- Buick, Oldsmobile and Cadillac full-size sedans (B and C bodies) and front-wheel drive personal luxury cars (E bodies). The figures in the last column quantify the extent of the option's failure. Over a three-year period, 2,208,354 GM cars were potentially equippable with air bags (although production capacity was not available for equipping more than about 13% of these cars with ACRS). Over that same period, 10,243 ACRS cars were built, for a three-year average installation rate of 0.46%, and a total build of less than 3½% of GM's ACRS production capacity of 100,000 a year.

The figures point to several other interesting aspects of the GM ACRS program. Oldsmobile, which was the only car division to take engineering responsibility for a major part of the system (the driver's bag) accounted for 54% of all ACRS sales for the three-year period, and 44% during the first year the option was offered. Buick, on the other hand, effectively dropped out of the ACRS program after MY74, building 89% of its air bag cars for that year, while Cadillac got a late start, building 61% of its ACRS cars during the same period that Buick was winding down its participation in the program.

A study of publicly available GM documents tends to confirm the figures' suggestion that Oldsmobile was more heavily committed to the program than were the other two selling divisions. For example, both Oldsmobile and Buick produced Master Parts Books dated

Table 2-1

ACRS AND POTENTIAL ACRS VEHICLE PRODUCTION

Make and Body Style	MY73	MY74	MY75	MY76	MY74 to MY76
Oldsmobile					
B&C (less station wagon)	378,601	192,149	197,082	257,292	
E	56,226	27,600	23,333	24,304	
Div total	434,827	219,749	220,415	281,596	721,760
ACRS production	-	2,433	3,050		5,483 (0.76%)
Buick					
B&C (less station wagon)	420,029	213,206	204,401	261,666	
E	34,080	20,129	17,306	20,082	
Div total	454,109	233,335	221,707	281,748	736,790
ACRS production	-	2,177	276		2,453 (0.33%)
Cadillac					
B&C (less limousine)	249,116	198,648	200,625	216,183	
E	51,451	40,412	44,752	49,184	
Div total	300,567	239,060	245,377	265,367	749,804
ACRS production	-	908	1,399		2,307 (0.31%)
			Total ACRS Build =		10,243
			Total B, C, E Build =		2,208,354 (0.46%)

MY73-76 figures from Ward's Automotive Yearbook

November, 1973, but whereas the Oldsmobile book provides the ACRS Group Number (14.865) and the individual parts numbers, the Buick publication does not. The very first ACRS car was a bronze Oldsmobile Toronado, built November 29, 1973.

B. Timetable

Figure 1 presents a timetable covering key events in the ACRS' lifespan. One of the most important points which it makes is that, although the 1974 GM cars were introduced in mid-September 1973, the ACRS cars were not available until January, 1974, and much of GM's promotion came even later in the initial model year. Thus, the ACRS did not appear in any of the 1974 divisional catalogs (although there was a separate ACRS color brochure individualized to the three divisions, and Oldsmobile produced one or two leaflets), while Oldsmobile didn't distribute ACRS pages for its Product Selling Information Book until February 8, 1974, and GM advertising for the system did not appear in major newspapers until March 4, 1974. This was the only GM ad for ACRS; Allstate Insurance produced some support advertising during this period.

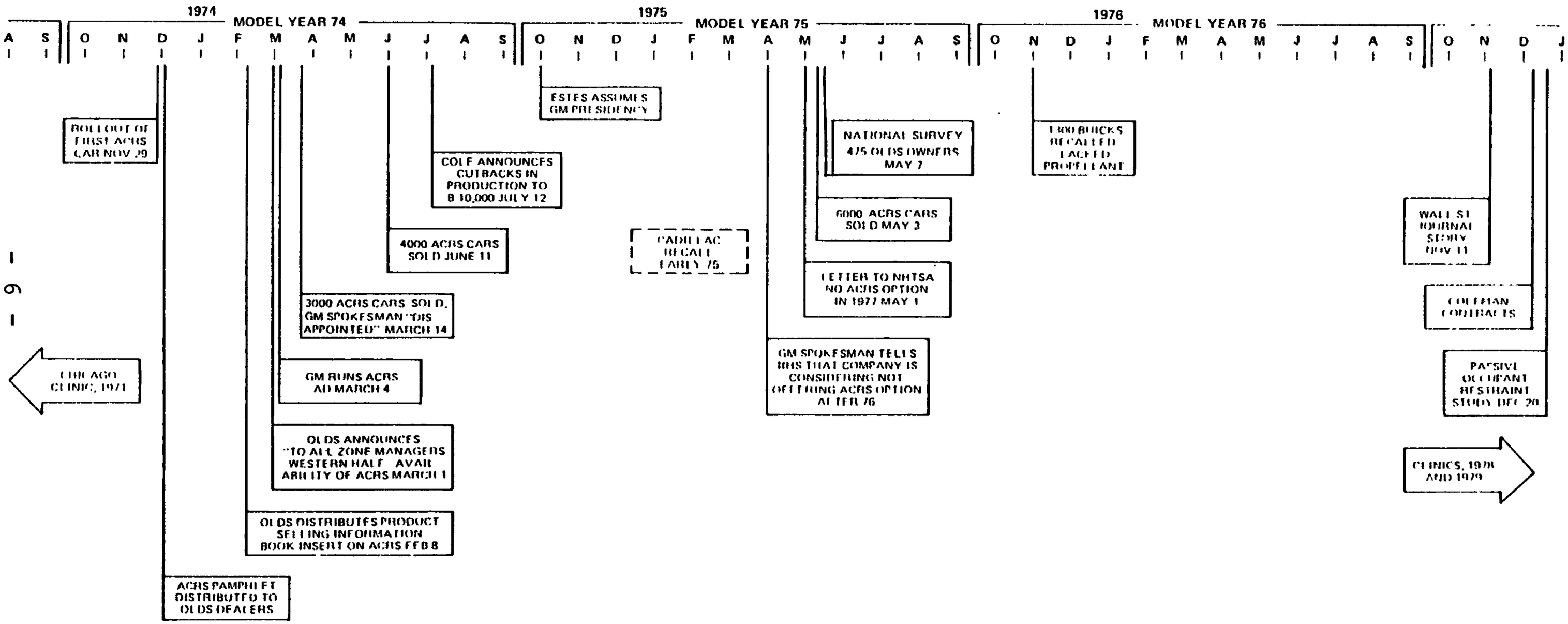
There were apparently distribution difficulties which may have delayed effective availability even further; the documents supplied by GM include an Oldsmobile memo "To all Zone Managers, Western Half," dated March 1, 1974, announcing the availability of "Air Cushion Restraint." Interestingly enough, only two weeks after this memo, a GM spokesman was quoted in the Washington Post (March 14, 1974) as expressing disappointment at the option's sales performance thus far.

The late start in 1974 is viewed by many observers, including some at GM, as a major contributor to the option's poor sales performance. Because of this, we have focused on MY75 wherever possible as the only full model year during which the option was offered, although the decision to cancel the ACRS program was made before MY75 production was complete.

C. Price

The ACRS option was available in MY74 for $225, in MY75 for $300 and in MY76 for $315. The dealer markup is reported as $75 for MY75 and also 25% for each of the other two years. Since GM's typical options markup was running around 23% on retail during that period, it seems clear that ACRS was as potentially lucrative a source of dealer profit as any comparable option.

FIGURE 1
AIR CUSHION RESTRAINT SYSTEM CHRONOLOGY


1974
MODEL YEAR 74
1975
MODEL YEAR 75
1976
MODEL YEAR 76
A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J
ROLLOUT OF FIRST ACRS CAR NOV 29
ESTES ASSUMES GM PRESIDENCY
COLE ANNOUNCES CUTBACKS IN PRODUCTION TO B 10,000 JULY 12
4000 ACRS CARS SOLD JUNE 11
CADILLAC RECALL EARLY 75
NATIONAL SURVEY 475 OLDS OWNERS MAY 7
6000 ACRS CARS SOLD MAY 3
LETTER TO NHTSA NO ACRS OPTION IN 1977 MAY 1
1300 BUICKS RECALLED FAULTY PROPELLANT
WALL ST JOURNAL STORY NOV 11
COLEMAN CONTRACTS
PASSIVE OCCUPANT RESTRAINT STUDY DEC 20
3000 ACRS CARS SOLD, GM SPOKESMAN "DIS APPOINTED" MARCH 14
GM RUNS ACRS AD MARCH 4
OLDS ANNOUNCES "TO ALL ZONE MANAGERS WESTERN HALF AVAILABILITY OF ACRS MARCH 1
OLDS DISTRIBUTES PRODUCT SELLING INFORMATION BOOK INSERT ON ACRS FEB 8
ACRS PAMPHLET DISTRIBUTED TO OLDS DEALERS
GM SPOKESMAN TELLS IIHS THAT COMPANY IS CONSIDERING NOT OFFERING ACRS OPTION AFTER 76
CHICAGO CLINIC, 1977
CLINICS, 1978 AND 1979

However, in the mid-1970s, relatively few options were as expensive as ACRS. Table 2-2 presents comparably-priced options for 1976 Buicks and Oldsmobiles, to offer some idea of what a customer with a fixed budget might have traded off in order to install ACRS. There were more expensive options, of course: Buick's least expensive air conditioner listed for $549, leather upholstery for a Riviera would have cost $417, and an electric sunroof for a two-door Electra listed at $725. These and other representative options appear in the table as a basis for comparision.

D. Marketing Strategy

1. Consumer appeals

We examined some of GM's market research on the ACRS, as well as various advertising and merchandising materials, in order to understand GM's marketing strategy for the option, and the basis for that strategy. Most of the material reviewed was provided by GM; however, we obtained several additional pieces of GM market research from other sources, including reports which GM itself had entered into public dockets but which were not included in the package provided to us.

Because the additional reports were obtained from publicly known sources such as NHTSA dockets, we do not attribute any sinister motivation to GM's failure to provide them to us. However, the necessity of supplementing the GM materials does suggest the possibility that there might be additional GM market research of which we are not aware.

The reason for going into this is to make the point that we have examined only one piece of pre-introduction market research, a report of a 1971 car clinic held in Chicago which was obtained from a non-GM source. It is difficult to believe that there were not other studies conducted closer to the introduction date in order to pretest and refine the general communications themes and specific merchandising materials. It is possible that some of this research was conducted by GM's advertising agency. At any rate, if it exists, GM has not shared it with us. The next research after the 1971 study is dated May 7, 1975, a week after GM's letter to NHTSA announcing the termination of the ACRS option for MY77. There was apparently no attempt to use market research for "mid-course correction" of GM's marketing strategy, even though GM was "disappointed" with sales as early as March, 1974.

Because it is the only pre-introduction market research of which

OPTIONS COMPARABLE TO ACRS IN COST, MY76

Description (order code)	List	Markup
Buick:		
Custom vinyl roof, heavily padded (G)	$399	$92
Riviera S/R trim package	$276	$63
Six-way power seat (all but Electra; Q1)	$247	$57
AM-radio and stereo tape player (D3)	$228	$52
Oldsmobile:		
AM-FM stereo tape player (UM2)	$341	$78
Toronado appearance option (Y79)	$281	$65
Shadow-tone paint (Toronado; Y73)	$239	$55
AM-FM stereo pushbutton radio (U58)	$236	$54

OTHER REPRESENTATIVE BUICK AND OLDSMOBILE OPTIONS, MY76

Description (order code)	List	Markup
Buick:		
Electric rear window defogger (M2)	$78	$18
Power windows (R1)	$122	$37
Tilt and telescoping steering column (S6)	$95	$22
Automatic door locks (four-door Electras; T5)	$120	$28
Deluxe wire wheel covers (Electra, Riviera; V6)	$70	$16
455 CID 4bbl V8 engine (A6)	$152	$36
Automatic climate control air conditioning (15)	$594	$137
Manual air conditioner (16)	$512	$118
Electric sunroof (Z2)	$725	$167
Leather upholstery group (Riviera)	$417	$96
Oldsmobile:		
Trunk lid release (A90)	$17	$4
Floor mats with carpet inserts (Toronado; B28)	$43	$10
Landau roof (98 coupes; CB4)	$150	$34
Pulse windshield wipers (CD4)	$28	$6
Illumination package (all but Toronado; C97)	$49	$11
Right side remote mirror (D13)	$28	$6
Heavy duty suspension (F41)	$23	$5
Anti-spin rear axle (all but Toronado; G80)	$54	$12
Cruise control (K30)	$79	$18
Theft deterrent system (UA6)	$115	$26

Source: Edmund's 1976 New Car Prices, Vol. 9, No. 9 (Great Neck, NY)

we are aware, and because it is a particularly well-done study, it is worth looking at the 1971 study to see what sort of approach to selling airbags emerges from it. The study is not a survey in the usual sense of drawing a random sample and questioning them. Rather it is a static clinic, which involves bringing invited respondents to a central site and exposing them to actual vehicles equipped with the features being tested. This clinic had a number of design enhancements, including exposing respondents to contrived pro and con news articles about air bags in order to test the stability of expressed opinions. Attitudes toward air bags and passive belt systems were obtained prior to exposure to vehicles equipped with these systems, and at various other points such as after seeing them but before knowing the price. Some 630 Chicago-area residents who had bought a new car within the past three years participated in the clinic, held May 21 through May 23, 1971.

Two of the key findings with respect to marketing airbags (the study also examined passive belts) were: "The consumer, based on what had been publicly released or stated, was not scared off the Air Cushion concept...The Air Cushion was preferred over the Passive Harness System because it afforded equal protection, but was judged far superior in all areas of style and convenience" [emphasis in original].

It is clear from the findings that initial, naive attitudes toward air bags were based less on safety than on convenience. Before exposure to the ACRS-equipped exhibit property, airbags got "good" ratings in the 80% and 90% range for various comfort and neatness items, but only in the 50% to 60% range for protection and security. In particular, the bags were not seen as particularly helpful in protecting child passengers, and another conclusion of the research was, "The subject of protection provided children will warrant specific educational communications in our merchandising and advertising strategy regardless of what system General Motors will offer."

At later stages in the clinic, data are presented primarily in terms of preferences for one system over another, or intent-to-buy; one table does show those preferring air bags giving safety as the most frequent reason, followed by freedom of movement, but it is not clear at what point in the clinic structure these answers were secured.

Judging from the report, there did not appear to be any opportunity during the clinic for concerns, questions and objections to emerge, unless anticipated in the questionnaires used.

Thus, given a situation in which GM was selling only air bays, the clinic results suggest that neatness, comfort and convenience would be major competitive advantages, particularly if selling against a three-point or passive harness belt system.

In fact, this is the approach that GM wound up taking, after what appears to be a very brief initial period of stressing the safety and technology of the ACRS.

The press kit distributed at the rollout of the first ACRS car on November 29, 1973 concentrated on the safety aspects of the system, merely mentioning that the Federally mandated ignition interlock system would not be required on the ACRS cars. The following month, Oldsmobile distributed a pamphlet to its dealers called, "What you should know about the Oldsmobile Air Cushion Restraint System," which is a straightforward description of the system and its safety benefits. Another Oldsmobile brochure (undated) titled, "You can have added safety in 60/1000 of a second with Oldsmobile's Air Cushion Restraint System" starts to introduce some of the themes suggested by the 1971 clinic: "There are no buzzers that sound and no warning lights that won't go off until you buckle your seat belts." Three quotes from ACRS users are provided, two talking about how they survived accidents, and one detailing "the convenience of not having to have the shoulder harness on and of not having the lights and buzzers that are on the standard cars."

The GM color sales brochure on ACRS, which was adapted to each selling division, uses comfort as its leadoff appeal. After opening the brochure, the customer sees on the first two facing pages these headlines: "You'll never know its there...unless you need it," "no buzzers, flashing lights or special starting sequence," "more freedom and comfort." The next double-page spread stresses the high-tech aspect of the system and its reliability; a drawing of a rocket taking off links to the headline "A.C.R.S....a space-age engineered passive restraint system."

Only the last double-page spread focuses on safety, by showing how the system works with cartoon-like drawings. The last text page of the brochure contains seven quotes from ACRS users, none of them on a safety theme. Two quoted statements mention convenience, two more specifically refer to the absence of shoulder belts, two to the lack of an interlock system, and one to the system's styling.

The one print ad which GM ran for the system appeared in early March, 1974. The ad appears to focus on styling considerations -- the artwork is a photograph of the ACRS dashboard (apparently the same photo used on the brochure cover) and the headline is

"Announcing GM's new Air Cushion Restraint System...You're looking at it." The ad copy positions the ACRS as an alternative to the Federally required lap and shoulder belt, and again makes the point that there are no buzzers or warning lights. There is no discernible safety content, unlike the Allstate Insurance ads which ran in this period. The brochures and print ads are reproduced in the Appendix to this report.

While the availability of ACRS was noted in the general divisional catalogs, it was given relatively little attention, typically a line or two noting its availability. None of the divisional catalogs of that period attempted to position it as a major source of competitive advantage over other manufaturers who did not have passive systems.

Finally, GM produced a ten-minute videotape on the ACRS for the Mini-theater system installed in dealerships. The tape was intended for consumers, but could also be used for salesperson training. GM provided a film copy of the tape, and a later chapter reports on the reactions of one group of consumers to it. Almost alone among the GM promotional materials, the tape carried a strong emphasis on safety, by showing the ACRS in operation during static crash tests, and in demonstration cars.

2. Vehicle Selection

An element of GM's ACRS marketing strategy involved the vehicles on which it was offered. As noted earlier, these were essentially the most expensive vehicles sold by the three upscale divisions of the Corporation. There are sound reasons for selecting large cars to carry the option, and these were ably summarized by GM in a statement prepared for the Senate Commerce Committee auto safety oversight hearings on March 21, 1974:

"There are a number of reasons: (1) installation on the larger cars, which were used in developing the system, allowed us to introduce the air cushion at an early date; (2) at the time the production decisions were made, the larger size cars were selling in substantially greater volume; (3) it was felt that this expensive option would have greater acceptance in that segment of the market where options are generally in greater demand; (4) it would follow our traditional pattern of introducing new options on top-of-the-line cars to gain acceptance; and (5) larger cars provide greater capability in their structure for sensing an impact."

E. Objectives

GM's sincerity in offering and promoting the ACRS option has often been challenged, most notably by a Wall Street Journal article which appeared November 11, 1976 with a headline charging that "GM failed to push device." Some industry observers have advanced conspiracy theories to the effect that GM deliberately wanted the ACRS option to fail in the marketplace in order to deflect pressure to force mandatory air bags through FMVSS 208.

While the GM experience has much to tell us about how, and how not to sell air bags, we see no evidence to support conspiracy theories. Marketing efforts did take place, the ACRS carried a normal or slightly better than normal dealer markup, GM parts numbers were assigned and service manuals prepared, and in fact some dealers found the ACRS to be a sales asset.

The conspiracy theories may have been generated by what appears to be GM's mixed motivation in marketing the options, and by what also appears to be undue haste in terminating the sales option. The latter point will be discussed more fully in Chapter V; however, GM's objective in offering the ACRS and its public statements about it are part of the context within which the marketing effort must be analyzed.

What seems clear at this point is that GM approached the ACRS in a frame of mind which was as much experimental as it was entrepreneurial. At several points during the ACRS' lifetime, starting with the rollout of the first ACRS car in November, 1973, GM officials stressed the importance of the offering as a means of gaining further experience with airbags.

A GM press release marking the start of ACRS production played up GM President Ed Cole's remarks on using the option to gain field experience:

> "Now, with three GM car divisions offering the air cushion as optional equipment, we will get experience in both manufacturing and customer service...We need this experience, together with the findings from our field test program of 1,000 air cushion vehicles built in the 1973 model year. Then we will be able to realistically assess the performance of the air cushion system in actual use under a broad spectrum of operating conditions. Once we have this experience, we can better assess the long-term potential of the air cushion."

A few months later, Cole told the SAE's Third International

Conference on Occupant Protection that "we believe the air cushion should remain an optional item, allowing us to further refine and develop it on an orderly basis...and to further evaluate its occupant protection value in the field." (Journal of Commerce, July 19, 1974)

Such statements, and there are others, do not argue for a strong conviction that GM was offering the answer to the problem of auto safety, nor do they suggest that the ACRS was treated simply as a potential source of revenue or marketing advantage by GM. On the other hand, they do suggest a strong interest in gathering information on a broader user base than was available from the first 1,000 air bag Chevrolets supplied to various fleets around the country in 1973.

To the extent that GM's lack of conviction about air bags was perceived by the buying public, it may have been a factor in the option's miniscule sales. One certainly senses a note of caution about this option which is rare in automobile marketing. But at the same time, it is difficult to see this caution as a deliberate attempt by GM to sabotage an effort on which it had such a high public profile.

III. EVIDENCE FROM THE DEALERS

At the start of this investigation, General Motors was able to identify a short list of dealers who appeared to be most successful at selling ACRS cars. The list was quite short, and became even shorter after we removed dealers located in Flint and Lansing, where ACRS cars were assembled, and dealers whose ACRS sales appeared to be accounted for by the fleet sales, typically to insurance companies.

What remained was a list of dealers who sold anywhere from two dozen to over 100 ACRS cars in the mid-70s, primarily as single-unit sales to individual buyers. We interviewed many of these dealers in person, and a few by telephone, in order to find out what was different about their market, or their approach to ACRS, which could account for their relative success where so many others had failed. When personal interviews were conducted, another Buick, Oldsmobile or Cadillac dealer in the same general area as the ACRS leader was interviewed as a control to find out why, in a market in which some ACRS cars were sold, they did not sell many. We typically spoke with a principal in the dealership, occasionally with a sales manager, and once or twice with a salesman. We conducted a total of 13 dealer interviews.

A. Dealer Attitudes

It quickly became clear that we were going to hear fewer success stories than we had anticipated. Many of the top-selling ACRS dealers do not recall that sales experience fondly. In many cases, dealers sold the cars because they were forced on them, or took a loss on the ACRS in order to make a sale. Some typical situations:

"The only way we could sell the car was to give the bag away."

"We had to take them at the end of the year to get leftover Toronados...we had to adjust the dollars in order to make a deal; we may have broken even on the cars. The house put bonuses on them to get rid of them."

"They showed up on the lot, and we had to sell them. They were still partially under an allocation system then, and it was getting to the end of the year, and we were running out of cars. So they told me, you can get a car for every air bag car you take."

In some cases, an initial dealer enthusiasm evaporated as ACRS sales proved difficult to get:

> "We ordered some for stock. We figured, sooner or later it's going to be mandated, let's get familiar with it. It didn't sell. It wound up as a giveaway item."

> "I saw it at an NADA convention. The way it was demonstrated, it was impressive as hell. Olds seemed like they were sold on it. We put a few in stock, thinking it might be a good deal, it might sell."

Clearly, once the cars were in stock, they were going to be sold, but not always to the profit of the selling dealer. Several of the more successful selling dealers sold the bulk of their ACRS cars by special order, making a conscious decision not to buy them for stock. One dealer, who views ACRS as a generally positive event in the history of his dealership, changed stock policies during the sales period:

> "After a while, we became a bit squeamish about whether we could sell them. You wonder if you should stock something you're only selling 2 or 3% of...we had one that hung on for a while."

All of this is to underline the fact that the top-selling ACRS dealers are not necessarily positive to the concept. We did, however, uncover some real success stories, dealers for whom the ACRS experience was a positive one, and who look forward to the re-introduction of the option.

What seems to distinguish these success stories from the other dealer experiences is, more than anything else, the personal commitment of the dealer to airbags, whether as a safety device, a comfort and convenience option, or purely as a source of revenue. Similarly, the "control" dealers whom we interviewed, who rarely sold more than two or three ACRS cars, shared many of the doubts and concerns about air bags which we heard from consumers.

For example, one dealer who sold more than 100 ACRS cars, mostly E-bodies, seemed to follow a strategy of ordering his E's as loaded as he could get them. Although he pointed out, "We believed in it," it was also clear that he saw the E buyer as an "across the board" options buyer who could easily be sold on the

system, if only for its innovativeness and novelty value. The E buyer, according to the sales manager for this dealership, "sees something on his neighbor's car and comes back and says 'I paid x thousand dollars for it, why doesn't it have whatever...'" Almost all of these cars were sold out of stock, and the manager summarizes the experience by saying, "They were there. Nobody ever came in and said 'I want an air bag,' but nobody ever said 'Take it off,' either."

Another dealer with an outstanding ACRS sales record believes strongly in the safety benefits of the system. He had hired a quadriplegic to do telephone prospecting, became involved in setting up wheelchair basketball teams, and eventually a spinal cord unit at a local hospital. His work for the hospital convinced him that lap belts were to blame for many cases of severed spinal cord in vehicle accidents. When the ACRS was announced, he embraced it eagerly, and motivated his salespeople to promote the option. "The salesmen were easy to sell," he reports, without any special incentives.

Still another dealer became convinced that "it made sense" in terms of his own needs, and therefore ordered ACRS cars for stock:

> "I had always been a seat belt wearer, but when the shoulder belt came in, I didn't like it. If you had an airbag car, you only had a seat belt, so I ordered them...we might have gotten them because nobody else would take them, but I know I didn't lose money on those cars."

Similarly, those dealers who sold few or no ACRS cars often showed a lack of information or a lack of faith in the air bag system. This was certainly not the only reason why the bags did not sell, as the rest of this chapter will indicate, but it does serve to emphasize the importance of the dealer's attitude in setting an internal climate in which the option will be either presented or ignored.

One control dealer, for example, raised a series of questions which, for that dealer, had clearly not been resolved: "What if it goes off when it's not supposed to?...Once they were out, wasn't there a problem getting them back in?" Another salesman recounted the fears that ACRS demonstrators elicited from dealership employees worried about premature deployment: "We put it on the side, by itself, so it wouldn't get hit." Still another sales manager admitted:

"Truthfully, nobody really sold them. Some salesmen probably suggested that people stay away from them -- they want to keep the customer. (Note: this is a dealership with a high repeat clientele.) At that time, the papers had articles about them going off accidentally...We weren't really sold on them. You have to be sold on it before you can sell it."

B. GM Support

There seemed to be no consistent relationship between the dealer's experience with ACRS, and the level of support and encouragement which he recalls receiving. However, the number of times that GM support was mentioned in the course of these interviews tends to reduce the credibility of conspiracy theories about the Corporation's role in marketing ACRS.

Thus, a salesman for one high-ACRS volume dealer characterizes GM's salesman training as, "Well, there was a flyer on it," while another high-volume dealer recalls that "We got good backup. The Corporation was pushing it, not Buick." Still another high-volume dealer points to GM's new product seminar as a major source of selling information on the system, but also says that the level of effort was not as intense as for other options, such as the new GM sound system: "There are Delco guys in all the time talking about Bose."

Most low-sale or no-sale control dealers recall little backup from GM, but there are a few exceptions to that pattern as well:

"We would get a bulletin -- GM didn't take it too seriously... we never even saw one work."

"Nothing was done. We had a little thing to hang in the showroom...There was no real advertising. They ran what we call some prestige ads."

"People did watch the Mini-theatre, and we had a rack of literature."

"We had a strong district manager. They really pushed it, Olds pushed it. We couldn't see any demand."

The Mini-theatre presentation was most often recollected, although not always as an effective sales tool: "You can't expect people to stand around. You want to talk to them."

However, as the comparison to Delco-Bose suggests, ACRS is not recalled as an intensively marketed option. This is apparent from some of the suggestions which dealers made for how ACRS could be marketed in the future:

"Have a six-month contest, pay $25 for every one sold, same as they did for diesel."

"They should treat it like the V-6 diesel where they gave us a car to use for 30 days. GM should put the bags on for nothing on a demonstrator, or after you sell the first five, you'll get back the price of the first."

C. How it Was Sold

Those dealers who successfully marketed ACRS used a variety of sales appeals centering around comfort, safety and innovativeness. The absence of a shoulder strap seemed to be a particularly strong selling feature, especially for women. One of the most successful ACRS dealers trained his salespeople to aggressively present the system as a safety benefit, figuring out, for example, how to dramatize a device which is not visible until it is used:

"You'd put the guy's hand on the cushion and he could feel the padding -- that was another selling feature."

Some industry observers have maintained that safety cannot be sold, pointing to Ford's mid-50s focus on safety, and to the unwillingness of salespeople to suggest that what they are selling can maim and kill as easily as it provides pleasure. We raised this question with the dealers who were interviewed, and heard little support for this conventional wisdom:

"Yes, you can sell safety. We do it with Vogue tires. You don't have to shout 'fire.'"

"You can sell safety. With a woman, you talk safety; half of them ask if the car has a frame."

"Safety can be sold, if you show the advantage. Can you sell an alarm system for $400? I'd have said no a year ago, but they're selling now."

D. Sources of Customer Resistance

The dealers, sales managers and salespeople interviewed, whether from high- or low-selling dealerships, consistently identified a number of customer concerns which either lost sales or made them more difficult to make. We are not aware of any pre-introduction GM market research which flagged these as issues deserving special attention. The key objectives, as reported by dealers, were:

- Unavailability of tilt steering wheel option with ACRS
- Fear of premature air bag deployment
- Lack of visible function
- Price and repair cost

1. Tilt wheel

Dealers mentioned tilt wheel more often than any other objection to the ACRS, perhaps because it was (and is) a high installation-rate item on the relatively expensive cars on which GM offered ACRS. Dealers recalled the tilt wheel issue with considerable specificity:

> "No tilt wheel. You could get a telescope, but the tilt seat and the tilt wheel were a natural combination."

> "Lack of a tilt and telescope wheel, and that was a major deterrent because the wheel was set like a bus wheel, more or less toward the horizontal."

> "We had cases where they pulled on the directional signal and cracked it trying to make the wheel tilt."

2. Premature deployment

Some dealers reported customers being scared off of ACRS out of fear that it would unexpectedly deploy in other than a crash situation. However, opinion was more mixed on this as a marketing barrier than on many of the other concerns, with some dealers echoing the dealer who said:

"They didn't want it, not because they were afraid of it -- they just didn't want it."

More typical, however, were these dealer responses:

"The air bag isn't seen as a safety item. It scares them more than safety."

"Fear -- what happens if I tap another car?"

Nor, indeed, was this concern confined to customers. One leading ACRS dealer confessed: "I had it on my own car, but I never really felt comfortable with it."

3. Lack of visible function

One of the most difficult problems to overcome in trying to sell a customer on ACRS was its invisibility. It made it difficult for the salesman to actually show the customer anything other than the Mini-theatre presentation, and it also raised doubts in customers' minds about whether the system would function when it had to (this issue is also discussed below, on page 29):

"They see the effect of the defogger, they can't see the effect of the bag."

"How do I know it's going to work? It's $225. I have belts that I know work. I have to have a wreck with this to know that it works."

"I have no way of testing it."

One effect of the ACRS's "invisibility" was the difficulty of selling it for its novelty or status value. One dealer pointed out, "They're not visible; you can't just say to someone, 'I got a car with air cushions,'" while another dealer thought that the system needed a conspicuous tag on the dashboard saying "Safety Oldsmobile" to dramatize the system. Although the steering wheel and dashboard on the ACRS cars differed from production steering wheels and dashboard for comparable GM cars, and included a status light which lit briefly each time the car was started, apparently this was not in itself sufficient to alert people to the system's presence. One or two dealers reported getting

trade-in ACRS cars from owners who had never been aware that their vehicles were equipped with airbags, and a few dealers find that the only way they can move used ACRS cars is to ignore the option when showing the car.

4. Price and repair cost

Price emerged often in conversations with dealers as a major obstacle to ACRS sales; as noted in the previous chapter, the system cost more than all but a few options available in those years.

The cost to repack the bag after a deployment seemed to be a particular focus of this price concern, and was probably mentioned more often that the list price to install the option in the first place:

> "It was a big customer concern, if it blows -- 'how much money to redo it, how long do I have to be without my car?'"

> "If you had to replace them, it was tremendously expensive, five or six hundred dollars. Some people just left it out when it popped."

It is interesting to note the vocabulary used by many of these dealers in discussing deployment -- blowing, popping, vomiting -- which reflects some of the consumer concerns to be detailed in the following chapter.

E. Sources of Dealer Resistance

We have just reviewed reasons why consumers seemed reluctant to buy ACRS, as reported by dealers. In addition, there were some reasons why dealers were reluctant to sell (or stock) the option, and these will be discussed here.

1. Price

Price was a problem for dealers as well as for consumers, indeed, because it was a problem for consumers. Several dealers mentioned the depressed economic condition of that post-oil embargo period, and insisted that even on these upscale cars, there was (and is still) considerable price sensitivity. One dealer talked about salesman pressure to stock cars with low sticker prices:

"The salesmen want the price as low as possible. They complain if we order cars with tilt. The customer will walk if the car is too heavily optioned, so the salesman is looking for the cheapest possible price."

One of the dealers we interviewed, raised an associated problem. His business is largely a lease business, and he found ACRS to be an active threat to his ability to put together a lease package:

"The residual of an air bag is zero. It would blow the car out of the lease as far as the bank is concerned."

2. Risking sales

The other side of price as a problem is that the profit from ACRS was not sufficient, in some cases, to motivate strong selling efforts by the dealer. If he initially viewed the airbag system as a liability, or was exposed to customer fear and rejection of the system, he often became concerned about risking the sale of an entire vehicle, or risking repeat business, if the customer took exception to aggressive ACRS sales efforts. One dealer sat down with a desk calculator and figured that his own net profit on the option, after commissions and taxes, would have been $30. His comment: "It's not worth the loss of a sale for $30. We wouldn't risk sales."

Several dealers expressed a fear that a premature deployment would end a continuing customer relationship; Cadillac dealers in particular seem often to have an older, repeat clientele trading every two or three years. One dealer reported having an ACRS buyer involved in a crash in which the bags deployed; he became so angry at the cost of repairing them that he left the bags out, and "I lost him as a customer."

3. Delivery time

The rather long lead time for ordering an air bag showed up more often as a dealer problem than one which affected customers, probably because most of the high-selling ACRS dealers sold a considerable number of their cars from stock. The key problem from the dealership point of view is that the salesman is not commissioned until the car is delivered:

"We sold a few, all special order. It was more than the five or six weeks we could promise on other cars...There isn't a salesman out there who wants to wait an unnatural length of time to collect his commission."

"Initially, we had very little trouble selling them. As the availability lengthened in terms of months, the salesman was less apt to make a full presentation."

4. Other problems

Only one or two dealers mentioned floor-planning costs for demonstrators, but one who did was particularly bitter about it since, from his point of view, he had nothing to demonstrate for his investment:

"I'm paying 21% just to show air bags, and I can't show anything. The car is going to sit."

Another dealer, who sold more than two dozen ACRS cars but at a loss on options, was particularly negative toward the concept because of problems it creates for his service shop, where his union mechanics refuse to work on airbag cars because of the explosive device they contain:

"The mechanic pulls the radio, and there's this tag that says 'explosive'; who's going to work on it? And stocking parts -- somebody drops a cigarette and my whole parts department blows up."

Curiously, this issue came up with only one dealer, one of the last dealers interviewed.

F. A Contemporary Comparison

Quite a few of the dealers interviewed compared their ACRS experience to their experience in selling diesel-engined cars. Usually, this was within the context of showing that GM can make marketing mistakes, although in one case a dealer compared his success with ACRS to his success with diesels:

"We sold more diesels than anyone. We had experience with them as a Mercedes dealer, and we were sold on it."

More typically, however, the similarity being stressed by the dealer was one of innovative (for GM) technologies which had gotten a bad press, which would require massive efforts to move, and which were not particularly welcome on the dealer's lot as either a new or used car. One dealer summed up his experience with ACRSby talking about his present diesel problems:

> "It's like with the diesel now. I told my people that they can sell it for $200 over tissue, and I'll give them $150. I can undercoat the car and glaze it, so I'm even. I told them that anything over the $200 I'll split 50-50 with them. You know, in three weeks I haven't sold one, even with that incentive. There are some things that just won't sell."

G. Future Potential

Very few dealers saw either any future potential for the airbag, or any threat to them if a competitor had it and they did not; in fact, in the latter case, one typical reaction was, "That's ok, it gives me a $600 edge."

Also typical was a flat refusal to get re-involved again:

> "We're not going to stock it, it's going to sit there like a cold duck."

> "I wouldn't take it, there's no market for it."

> "I picked one up recently in a used car on ------- Avenue. I couldn't get rid of it."

> "I think it's a dead issue. It would be difficult to revive. The money needed to educate the public is monumental; dealers couldn't do it, they're not a group known for taking the lead."

Only a considerably lower price would engender any sales optimism for most of these dealers: "At two, three hundred dollars, I might be able to sell it." But even in the midst of all of this pessimism, there are few positive voices to be heard:

> "Definitely a plus. I was out at the President's Council recently and I asked Roger Smith when we're going to get more."

H. GM Dealer Survey

An undated memorandum report on an informal survey of Detroit area GM dealers during the ACRS selling period confirms virtually all of these findings. The memo's summary states:

1. A considerable customer education problem still exists with regard to the air cushion. The unanimous comment made was that no one is asking for them.

2. High, full-size car inventories and extremely cost-conscious consumers militate against air cushion sales and the stocking of air cushion-equipped cars by the dealer.

3. Skepticism of air cushion reliability appears to exist among salesmen. Their reaction is that the Corporation has made little effort to educate them in air cushion function and benefits, and not given them any good reason to sell them.

4. If the customer does not specifically request an air cushion-equipped car, chances are one will not be sold because the dealer will avoid the subject in order to make a sale from stock on hand.

5. Air cushion promotion at this time might not be well received at the dealer level where he is struggling to reduce inventory.

IV. EVIDENCE FROM CONSUMERS

In one sense, all of the evidence on the attractiveness of ACRS comes from consumers: only 10,000 bought the system. But in order to get a better sense of how they saw the strengths and weaknesses of the system, with a view toward providing guidance for future airbag marketers, we examined two sources of information:

- Recent group depth interviews with consumers who bought cars which could have been equipped with ACRS
- Reports on market research conducted during the ACRS period and immediately afterward

We will examine the results of each effort separately.

A. GM Buyers

Part of the original plan for this project was to recontact some 1974 through 1976 buyers of Buick, Oldsmobile and Cadillac B, C and E body cars, and talk to them about how they recall the ACRS being presented to them. The mechanism for securing this information was the group depth interview, a market research technique which brings eight or nine consumers together with a trained moderator to discuss a subject in some depth. The moderator serves to keep the discussion on the topic, without contributing his own viewpoint to the discussion.

The R.L. Polk Company was able to provide names of people who had bought such cars new, and who still owned them. Because of the amount of time which had elapsed since the purchase, and because of reports that the system was not actively presented to many who bought those models, we limited the number of group depth interviews to two, and used them to probe not only recollection of mid-70s selling efforts, but also current attitudes toward airbags. One group was also used to evaluate the principal GM merchandising materials for the ACRS, the ACRS brochure and the Mini-theatre presentation. Our findings from these two group depth interviews, one in Los Angeles and one in New York, are summarized in the following sections.

1. Awareness

Virtually all respondents were unaware that airbags were an option on their cars. Although they reported shopping at least a few GM dealers, and spending time with the salesperson from whom they bought their car, no one recalled being told about ACRS, although they recalled efforts to sell other options:

"My experience has been that they push the extra equipment."

"In my Cadillac, they pushed six-way power seats. I bought it. I bought things I really didn't intend to buy."

After talking in general terms about options, the moderator specifically mentioned the ACRS, and the brochure and Minitheatre used to sell it. The closest anyone came to recalling any of this was one respondent who said:

"I think I knew, but I wasn't going to fool around with something that just came out."

Other, more typical reactions included:

"I remember in the dealer they had videotapes. That was the first time I saw tapes in the showroom, but they were about tires and other things. They didn't show anything about air bags."

"We read the brochures, and I don't even remember reading about it anywhere."

2. Attitudes toward air bags

Once the topic of air bags was raised, reactions tended to be cautiously positive, and stressed safety over comfort and convenience:

"It seems like a safe thing to have in the case of an accident."

"I've seen them demonstrated on television and I would try them. It may not be 100%, but I like the idea."

"If it were an option now, I would be inclined to take it because I think it's the best protection you probably have in case of an accident."

There was, however, little enthusiasm and some felt the lack of information:

"You see a lot of stories about them, but I've never met someone who has them or heard of an accident where they were used."

"I'm a rank and file consumer and I know nothing about them. I want to learn about it in layman's terms and not some technician's."

"I would shy away from them and let someone else experiment with them first."

Air bags are clearly of some interest, but the emotional tone in both groups was low level, suggesting that the topic was not one viewed as important to these people. No one, for example, was in the least bit upset about not having been offered an opportunity to buy ACRS.

3. Concerns about the system

Discussion of air bags in both groups very quickly turned to questions about how and whether the systems work. Such questions are of great importance to air bag marketers, because they point to issues and concerns which must be addressed in sales materials or presentations. These concerns can be categorized as concerns about how it operates in a collision, and broader concerns about the system itself.

Collision concerns

At what speed does it go off?
Is it only good for a front-end collision?
How sensitive are they?
How fast do they inflate?
Do they really work?
What would happen if broken glass punctured the air bag?
Is the car operable after the bag inflates?

System concerns

Would you still need to wear seat belts?
Would you go in and test it every so often?
Would it deteriorate from damp or smog?
After it pops out, do you have to take it back to the dealer?
Will it still function after eight years?

The procedure, in each group, was to allow time for all of the respondents' questions to emerge before attempting to either explain airbags in Los Angeles, or allow the GM marketing materials to explain airbags in New York.

In some cases, even after explanations of how the bags work, respondent concerns came out as statements of fact, and not questions which need to be resolved:

"If you have a big accident and this thing inflated, you'll be completely blinded. Without this, you might be able to steer your car to avoid something, or steer yourself to a safer area."

"You have no more control over the car. I think that's a disadvantage."

A persistent concern was obtaining some assurance that the bags would function when needed; in some ways, this is similar to the salesman's problem of not being able to demonstrate the bag, or even confirm its presence without deploying the system. The assurance is necessary because of assumptions that the system will deteriorate over time:

"You leave the car in the hot sun for a couple of years, you know what's going to happen to those bags; they'll be glued together."

The system check light on the dashboard was accepted by some, but a number of respondents categorized it as an "idiot light" of a type which they have learned to distrust, and one respondent pointed out that "the light is just an electrical checkout. It doesn't really tell you if the bag is in good condition."

Price became a major concern after the moderator suggested a $500 to $600 installation price as a current equivalent of the $225 to $300 the option cost in the mid-70s.

"The price is a factor here. For $500, even for safety, I think it's asking too much for it."

"If it's between the airbag and air conditioning, I'd take seat belts and air conditioniong. Now, if I could get a lower insurance rate, it would pay for itself in five years; then there's no question about it."

Some respondents simply smiled and shook their heads; one or two suggested that it should be made standard so that they need not choose among options.

4. GM materials

Respondents in New York were provided with copies of the GM ACRS brochure, as reproduced by a color xerography process, and then saw the 10-minute Mini-theatre film shown (as a videotape) in many GM showrooms.

Reaction to the system was generally more positive after exposure to the GM materials, particularly the film. However, the brochure did leave some questions unanswered, principally having to do with whether the bag allows one to see and maintain vehicle control after inflating. The film was far more reassuring on this point, because it could communicate the speed of the deployment cycle in a way which the brochure did not. Figure E in the brochure, one of a series of cartoon figures showing air bag deployment, depicts a person bent forward with his face buried in the airbag, and this was a subject of comment.

Even the film was not completely reassuring. Comment centered on a scene showing a female volunteer driving a car in which the bags are deployed by a radio signal without prior warning to the driver. Respondents were impressed that she was able to maintian control after being surprised by the bags, and that she could pat the bag down into her lap and see through the windshield, but after a few minutes of discussion, there were some second thoughts:

"She knew it was going to go off at some point, because they had already told her."

Other doubts remained, and some comments indicated that some of what the film was trying to communicate did not get across:

"It offers better protection for the passenger. It doesn't do much for the driver because he's got that steering wheel and it doesn't do nothing for that."

"I don't know if this small cushion will be strong enough to give enough protection when you have a really bad accident. I wasn't really convinced enough; the demonstration wasn't strong enough."

"I think that film would have to show a little bit more...Put dummies in the cars, actually show some studies at 40 miles, 50 miles and so on."

"I like the system, but they need to improve the blinding problem."

None of our respondents rejected the system, as something which they would not take if it were free, but very few saw the price value ratio as acceptable when the system was positioned as costing more than air conditioning.

B. Market Research

There are two key GM studies which cast some light on why consumers bought or did not buy the air bags: the ACRS National Consumer Research Study of May, 1975 and the Passive Occupant Restraint System Study of December, 1976. As the dates indicate, both studies were carried out after GM had already made the decision to cease offering ACRS as an option, and so were not able to provide direction for modifying the ACRS marketing effort. Other GM market research to which we had access was devoted to the assessment of consumer demand for various restraint systems, and provides little if any information on consumer perceptions of the option.

The two studies had different designs and objectives. The earlier study surveyed 475 owners of 1975 Oldsmobile B, C and E body cars, 97% of whom do not have ACRS, while the more recent study sampled roughly equal numbers of ACRS owners and non-owners (323 and 304 respectively). The results tend to confirm the low level of knowledgeability and conviction about ACRS usefulness, and the price sensitivity which turned up in our dealer and consumer interviews.

1. Awareness

The 1975 study found moderate prepurchase awareness of the ACRS, although recollection data such as these tends to exaggerate awareness. A quarter of these Oldsmobile owners claimed to be very much aware that airbags were available as an extra-cost option in 1975, while only 32% claimed to be totally unaware. Similarly, 23% of those who did not consider buying ACRS cited that lack of awareness, while 13% "never thought about it" (some may have given both responses, so the percentages should not be added).

Most of that awareness apparently derived from media reports, rather than from GM marketing efforts, although the 1976 survey showed that 12% of ACRS owners first heard about the system from a car dealer, compared to none of the non-owners. An additional 26% of owners (19% of non-owners) first heard about ACRS in magazines or literature, but the wording of the report does not allow determination of how important sales literature was.

Such high awareness figures are, of course, at variance with theories which suggest that GM played ACRS down, and that consumers would have embraced the system had they only known about it. Instead, they suggest that low sales were due to consumer attitudes toward the system. Indeed, the 1975 study shows prepurchase awareness higher among those who see ACRS as not too/not at all beneficial than among those who see it as somewhat/very beneficial.

2. Knowledge and enthusiasm

Even among those presumably most committed to ACRS, those who bought air bag cars, the level of enthusiasm is moderate, at best. Both GM studies show that about half of those buying ACRS cars got the system only because it happened to be on a car they bought. While the ACRS sample in the 1975 study is, at 13 repondents, too small to provide trustworthy data, the 1976 data, based on 323 ACRS owners, show that "Almost half of the owners of the air bag-equipped cars felt that it positively influenced the purchase of that specific car. Their reasons were almost equally divided between 'owning the safest car available' or 'to avoid having seat belts.'"

This tends to confirm what we heard from the dealer interviews, particularly from those dealers who took a loss on the air bags in order to sell the car. It also helps to explain why the 1976 survey found that 30% of the ACRS buyers claimed to have paid the same or less than the cost of a comparably equipped non-air bag car.

Among those who did not buy ACRS, the 1975 survey found considerable lack of knowledge, and little disposition to see advantages in air bags:

> "The majority of statements can be grouped into three major negative response categories: 'EXTRA COST' -- 'APATHY' -- and 'LOW CONFIDENCE AND RELIABILITY EXPECTATIONS' [emphasis in original]."

> "Additionally, and taken in 'overall context,' the general and overriding conclusions to be drawn from these statements is a 'lack of specific ACRS consumer knowledge' concerning not only the basic operation and cost of the option, but also the lack of even rudimentary knowledge concerning any benefits that might be derived from having such an installation on their car. The old anxieties of inadvertent deployment or failure to deploy, including earlier fears concerning specific cause and effect air bag tragedies, are only nominally represented and therefore do not constitute any current or significant predictor of ACRS attitudes and interests."

The latter conclusion, about the limited impact of airbag anxieties, may be too sweeping; the evidence, based on an open-ended question, only indicates that these concerns are not "top of mind" issues. The same question, for example, showed only 1% spontaneously mentioning lack of tilt wheel as a reason for not buying, although the dealer data suggest that this reason may have been somewhat more in evidence.

What is clear, however, is that many of these potential ACRS buyers had doubts about the system which were not resolved either in the showroom or by GM merchandising materials. Even the non-buyers who are most positive toward ACRS, those who say they are very or somewhat likely to order air bags on a new car, express a need for more information. Of this group, 14% "would like to know more about them," 6% "would like to see concrete proof of workage," 6% "need to see a demonstration of them," and 3% "don't know anything about them."

3. Price sensitivity

Both studies also confirm (as do several of the GM clinic studies) the price sensitivity which our dealers reported encountering. Although the actual percentages varied from study to study, generally there was little interest at $300, interest picked up at $200, and there was considerable interest it the ACRS was a $100 option. However, the 1976 study also shows over a quarter of non-ACRS owners unwilling to accept the system even it pro-

vided for free. This is powerful testimony to the level of uncertainty about, or actual fear of the system among American car buyers in the late 1970s.

V. WHY IT FAILED

The investigation detailed in the previous chapters, while hardly exhaustive, leads to a number of conclusions about why the GM marketing effort failed, and what would be required if airbags are to be marketed in the future. Before proceeding to our own analysis, however, it would be useful to examine other analyses of the GM airbag program in order to see what they have to contribute to our understanding of that effort. Such analyses, up to this point, have tended to be partisan, emanating either from critics of GM, or from the Corporation itself. We will examine each in turn.

A. The Lack of GM Commitment Analysis

In one form or another, the proposition that GM did not really want to sell airbag cars has been current for years, and is best summarized by the Insurance Institute for Highway Safety's assertion, in the June 25, 1980 Status Report, that "...General Motors has pursued a policy of withholding that technology from the public, encouraging delay of Federal passive restraint requirements, and discouraging consumer interest in the handful of air bag-equipped cars it manufactured in the mid-1970s." Essentially the same position is taken today by industry observers who are critical of GM, one of whom recently said that "they want to show that it doesn't work, that there's no interest, and that it shouldn't be implemented."

This analysis depends on two assertions: first, that there was a deliberate GM policy to discourage ACRS sales, and second, that GM's own market research shows large numbers of people who desire air bags.

The latter issue is more easily dealt with, and to some extent betrays the critic's unfamiliarity with market research procedures. The IIHS publication just cited, for example, charges that GM's "own undisclosed consumer studies showed an overwhelming demand for air bags -- even at much higher prices than automatic belts -- throughout the 1970s."

Generally, market research questions which ask about product preference or intent to purchase are useful primarily for distinguishing the level of consumer preference for various alternatives, and not particularly useful as a predictor of actual purchase behavior. Thus, to know that over two-thirds of those queried in a 1975 GM survey indicated at least some interest in

purchasing air bags does not warrant the assumption that the actual market for airbays is anything near two-thirds ot American car buyers. There is a phenomenon encountered in survey research called "acquiescence effect," which manifests itself as a tendency to agree with, or show support for, whatever it is that appears to be of importance to the interviewer. Acquiescence effect is a matter of being a nice guy, and not unduly discouraging an interviewer who seems interested in air bags because he or she has asked so many questions about them. A related phenomenon is termed "social desirability effect," which manifests itelf by a tendency to support statements or positions which one feels that one should support as a good citizen, responsible parent, etc. Both effects would tend to exaggerate support for airbags.

It is still reasonable, in spite of acquiescence and social desirability effects, to ask about air bags in some sort ot comparative context, whether against another socially desirable alternative like passive belts, or at various price levels. In the latter mode, which was done most often in GM research, the actual percentage figures can be discounted for social desirability and acquiescence effects, but the relative differences provide valuable data on price sensitivity. In effect, the figures are used as we are asked to use the EPA gas mileage figures -- not as estimates of actual mileage, but as a basis for comparison.

Finally, the context in which a question is asked must be taken into account in understanding what the data say. With this in mind, GM's market research throughout the 1970s does show some interest in air bags relative to passive belt systems, and does show some interest in air bags as a $100 option, but shows relatively little interest in air bays at the price at which they were actually offered. The "overwhelming demand" to which IIHS referred was clearly not for the product as offered by GM, judging from the reports which we examined.

Thus, a 1971 static clinic showed air bays preferred over passive belts at a 2:1 ratio. However, the context of the question is relevant -- these results came after respondents had seen a film on restraint systems, and after they were told that the air bays would cost $130 to $160.

A 1975 survey of 475 Oldsmobile 88, 98 and Toronado owners found that 55% thought that standard air bays would be somewhat or very beneficial, and that 68% think that "the motoring public" would be at least somewhat interested in airbays at $100. But that figure drops to 38% at $200, and 19% at $300. Similarly, in a 1976 survey, 43% of 304 owners of non-ACRS GM cars claimed that they would buy air bags for their next car at $100, 22% at $200 and 14% at $300; just over a quarter of all non-owners would not accept them even if free.

And again, a 1978 static clinic showed that GM B-body (less expensive, full-size car; Oldsmobile 88 rather than 98) intending buyers preferred air bags over existing active belts by 41% compared to 25%. However, after being told that airbags would cost $315, these figures reverse, and after-price preference for air bags is even lower among those intending to buy the less expensive A-body (intermediates, like Buick Century) or A-special (coupes, like Monte Carlo) cars.

One can fairly conclude from all of this that there is interest in the system, and that purchase intent is highly dependent on price, but not that there was "overwhelming demand." And even the level of consumer interest has to be qualified somewhat, because none of these surveys really probed to discover the barriers, anxieties and unanswered questions which were so apparent in the showrooms.

The charge that GM deliberately sabotaged its own ACRS program was probably presented most fully in an article which appeared in the Wall Street Journal for November 11, 1976. Its key conclusions:

> "A Wall Street Journal survey of car buyers, GM dealers and some close watchers of the auto scene shows that the air bags received no wholehearted promotion; instead, the company and its dealers actively discouraged sales...
>
> "Much of the resistance apparently sprang from salesmen's doubts about the reliability and effectiveness of the airbag, but they may well have taken a cue from coolness at GM. My salesman says he and his colleagues picked up 'vibrations' from critical factory pronouncements about the devices."

Much of the article goes on to detail lack of dealer enthusiasm, with a dealer quoted a being "leery" of the device, and customers finding that salespeople are arguing against it.

Our task in this study is not to judge GM, either by condemning it or exculpating it. However, it should be noted that much of the dealer behavior reported in the Journal article is explainable in terms other than a lack of effort by GM, and it should also be noted that we found at least some signs of GM pressure to sell ACRS cars.

B. GM's Own Analysis

According to GM, there does not exist any formal post mortem study or analysis of the failure of the ACRS marketing effort. Statements by GM management and spokesmen tend to emphasize the relative lack of consumer interest, and the depressed economy and reduced demand for large cars which characterized the mid-1970s.

The consumer attitudes, as noted above, are complex, and embody both interest in the system and anxiety generated by the system. We will consider in more detail below how those anxieties were, and could have been, addressed.

The connected issues of the state of the economy and large car sales are used to explain the ACRS experience in an unpublished internal document titled "General Motors' Position on the Air Cushion Restraint System (ACRS)," dated March 8, 1976:

> "Of course, large-size cars in general were facing an uphill battle at that particular time due to the energy crisis, the emergence of the small car, and a general downturn in the economy, which caused much belt-tightening on the part of the consumer."

The limited demand for larger cars is undeniable; Table 1-1 provides 1973 production figures for Buick, Oldsmobile and Cadillac large sedans, as well as production figures for the years 1974 through 1976 when ACRS was offered. For Buick and Oldsmobile especially, the decline from 1973 to 1974 was dramatic, with 1974 production barely more than half of 1973. It wasn't until 1976 that the first signs of recovery began to appear, and even in that year, 1973 production levels were not reached.

However, while reduced demand for large cars clearly limited the actual number of ACRS cars sold, it need not have had any necessary effect on the proportions of large cars sold with ACRS, which at no point exceeded 1%. And in spite of the price sensitivity which characterized that period according to the dealers with whom we talked, and the depressed economy, the general trend of options installation on these cars was upward throughout the period, as can be seen in Table 5-1. This table, which focuses on Oldsmobile and Buick full-size sedans of the type which could potentially be equipped with ACRS, shows a rising trend on seven out of eight popular options, with vinyl roof installation remaining relatively stable throughout the period. Note particularly that installations of stereo tape decks, priced comparably to ACRS, increased over that period, and that installation of air

Table 5-1

INSTALLATION RATES FOR POPULAR OPTIONS, 1972 TO 1976

	Buick B and C Bodies				
	1972	1973	1974	1975	1976
Tilt wheel	42.1	47.2	56.7	63.5	70.3
Cruise control	23.5	28.4	38.3	51.1	61.8
Power locks	26.3	32.6	42.0	49.9	56.1
Power windows	56.0	57.5	61.8	67.0	63.3
Power seats	42.8	43.9	49.1	52.5	55.6
Vinyl roof	65.3	61.5	62.8	63.5	70.6
Stereo tape	10.2	13.1	18.7	22.5	27.2
Rear window defogger	NA	29.9	37.6	43.2	45.2
Air conditioning	93.2	94.3	94.9	94.8	96.0

	Oldsmobile B and C Bodies				
	1972	1973	1974	1975	1976
Tilt wheel	36.0	44.2	52.5	59	68.1
Cruise control	16.4	26.4	36.6	52	63.9
Power locks	25.3	34.6	42.1	50.4	56.2
Power windows	42.4	46.6	52.0	57.7	59.3
Power seats	35.8	39.4	43.5	48.3	50.7
Vinyl roof	69.0	67.1	68.8	65.2	65.3
Stereo tape	7.4	10.5	13.2	16.2	20.2
Rear window defogger	NA	32.4	40.3	47.2	50.9
Air conditioning	92.6	93.9	94.8	96.6	96.2

Source: Ward's Automotive Yearbook 1973-1977

conditioning, priced well above ACRS, was steady and virtually universal on these cars during that period.

The Automotive News 1976 Market Data issue commented that "even in recessionary times, when total sales are down as they were in 1975, there was a continued surge in demand for extra add-on options, as there has been over the past decade. The trend continued despite a new emphasis on fuel economy."

While consumer price sensitivity for ACRS is undeniable, showing up both in contemporary market research and in accounts given us by dealers, this price sensitivity is not absolute, based on reduced discretionary funds, but rather reflects a judgment about the benefit which ACRS returns relative to its cost. Presumably, if the consumer had been convinced of the value of ACRS, the state of the economy would not have prevented the option from being installed at the rate anticipated.

The one point at which slow large-car sales were likely to have impacted the ACRS program has to do with dealer priorities. When ACRS cars were not in stock, they were unlikely to be pushed because the dealer's goal is to get rid of the cars in inventory on which he is paying interest. When ACRS cars were in stock, they were at a price disadvantage relative to comparable non-ACRS cars, forcing the dealer either to become effective at convincing customers of the benefits of air bags, or to take a loss on the bags in order to move the car.

C. Our Conclusions

Based on our analysis of the ACRS marketing program, GM was laboring under two major handicaps and one minor handicap in a market in which demand for ACRS could not be taken for granted. The handicaps were:

- Lack of dealer commitment
- Unanticipated consumer concerns
- Installation on full-size vehicles

Before discussing these handicaps, it is important to understand that this analysis speaks to the issues of improving ACRS marketing performance, recognizing that there was, and is, some level of consumer resistance both to the product and to its price. It is quite possible that no marketing techniques could have resulted in installation rates comparable to those of other major options; our concern is whether the GM performance could have been improved.

It is also important to understand that some options have very slow growth rates, and that an improvement in marketing performance might mean laying the groundwork for slight growth in the coming year. If GM can be faulted for anything, it is not for deviously sabotaging ACRS, but for its apparent need to see dramatic, short-term results. As the chronological table in Chapter One shows, a GM spokesman was expressing disappointment with ACRS sales as early as March 14, 1974, only 10 days after GM ran its first and only ACRS ad, and a little more than a month after Oldsmobile completed distributing product selling information on ACRS to salespeople. GM was aware that 1974 ACRS sales were going to be hurt by the late start even before the first air bag car came off the assembly line; Oldsmobile General Manager Howard Kehrl was quoted in the September 12, 1973 Detroit News as saying: "Because of the delay, we're going to miss the right market for airbags...The people who buy the Toronado and 98 models in the fall go big on options, but the air cushion won't be available then." Yet in spite of that awareness, Buick effectively dropped out of the ACRS program after the disappointment of 1974. The contrast with automotive air conditioning is instructive. First introduced in 1953, it took until 1955 for installations to exceed 1%, until 1959 for installations to exceed 5%, and until 1962, nine years after introduction, for installations to exceed 10%.

If marketing success is defined in such modest terms, attention paid to the following areas might well have resulted in an improvement over the actual marketing experience.

1. Lack of dealer commitment

One of the strongest messages coming out of our dealer interviews is that the initial attitude of the dealer is strongly linked to his ACRS sales performance. Those who had positive selling experiences saw ACRS as a positive marketing advantage, and those who sold few cars, or took losses on ACRS cars, often shared the same doubts and fears as consumers.

The correlation is not absolute; we talked to dealers who were initially enthusiastic but who wound up regretting decisions to stock the option. But we did not talk to anyone who started out skeptical and was convinced by his showroom experience. The necessity for a positive attitude on the part of the dealer, and even more so on the part of the greeters and salespeople, seems to demand a significant effort on the part of any airbag marketer.

It is also important to understand those aspects of the system which discourage dealers and salespeople from promoting the

option. One such disincentive in the mid 1970s was the long delay on special order ACRS cars, with consequent delay for the salesperson's commission.

The final chapter of this report considers some approaches to building dealer commitment; at this point, we merely want to underline the importance of that objective to any future airbag marketing effort. Although there is evidence that GM, and particularly Oldsmobile, made efforts to develop such commitment, those dealers who were most effective in marketing ACRS seem to have arrived at a positive view of the system more or less on their own. Had fewer dealers shared the fears and skepticism of the consumers, the mid-70s effort may well have been more successful.

The importance of the dealer as an information source is underlined by GM's ACRS National Consumer Research Study, which found that 12% of ACRS buyers first learned about the system from dealers, compared to zero percent among non-buyers. There is a somewhat similar finding which suggests that sales literature on ACRS was more important for buyers than non-buyers, but the question confounds magazines and brochures in such a way as to be, at most, suggestive.

2. Unanticipated consumer concerns

Much of GM's market research seems to have been developed to deal with a market in which FMVSS 208 would mandate some sort of passive restraint system. Thus, the three clinic reports which we have examined all have as some part of their objective an assessment of air bags against one or more passive belt systems. There is a fair amount of data on how attractive air bags are (or are not), but very little which seemed aimed at developing a marketing platform for the option and nothing, to the best of our knowledge, which pretested the marketing materials used.

As a result, GM and its dealers were unprepared to deal with some key problems which emerged in the course of the marketing effort, primarily in the form of unanswered questions, or unwarranted assumptions made about the system. The issues which came out in our two group depth interviews were also by and large the issues which came out in the showrooms in the mid-1970s. Indeed, as early as 1972, Allstate Insurance Company had research which showed tht 62% of car owners believed that panic braking can cause inflation, 63% believed that the bags could fire accidentally, and 82% believed that the bags would block vision when deployed.

GM's comfort and convenience positioning may have intensified these concerns by giving the impression that GM itself was unsure of, or mistrusted the safety benefits of the ACRS. What is particularly significant is that these are all safety concerns; GM was in the peculiar position of selling an advanced safety device which gave rise to safety concerns among those it was designed to protect.

There were other apparently unanticipated problems as well, such as the unavailability of tilt wheel, mentioned by vitually all of the dealers, and concerns about the cost and inconvenience of repairing the bags after a deployment. And there were some difficulties inherent in marketing an item which could not be seen to work or to be ready to work. Intensive qualitative research might have identified some or all of these problems far enough in advance to address them in merchandising materials, and develop salesmen training aids for countering them.

Failure to address these issues, particularly the safety fears, led to the price sensitivity which characterized so many buyers, and allowed ACRS to be seen as both expensive and of doubtful efficacy, a fatal combination.

3. Installation on full-size vehicles

While GM's logic in offering ACRS first on full-size, upmarket vehicles is compelling, there is also evidence which suggests that ACRS demand grows as vehicle size drops. GM's own Passive Occupant Restraint Study, done late in 1976, identified A-body owners (intermediate sedans like Cutlass) as being more interested in buying ACRS at every price level given than owners of large sedans or front-wheel drive personal cars; the second most interested group were owners of Chevrolet Novas and their compact equivalents in other divisions.

GM apparently found the results of this study so intriguing, that it commissioned a follow-up study to test air bag acceptance among owners of several of its smaller lines. That follow-up study concluded that:

> "There is a higher acceptance of airbags among owners of smaller vehicles ('A,' 'X,' 'F,' 'H' and 'T') than among larger vehicles."

> "The smaller car owner is also willng to pay more to get the air bag system than is the larger car owner."

"The 'A' and 'T' (Chevette) owners show the highest acceptance of the air bag system among all owner groups tested."

"The smaller car owners have stronger feelings towards safety-related features in cars (relative to larger car owners). A higher ratio felt that injury reduction features like air bags return more in terms of safety value than they cost."

"Smaller car owners also express their concern over safety by indicating a higher level of seat belt usage than the larger car owners."

"The smaller car owners are more upscale in terms of values, are younger, professionally employed and better educated. These characteristics suggest that small car owners may be more receptive to new ideas, new products, or new safety equipment, like the airbag."

This is consistent with our own findings in work done for NHTSA shortly after this time, indicating that owners of full-size cars tend to view them as inherently safe vehicles because of their mass, while people who were first moving into smaller cars in the wake of the oil embargo of 1973 often had to overcome serious safety concerns. Had airbags been installed on smaller cars, they would have had to be positioned more strongly as a safety item, and less of a comfort and convenience item, and they would undoubtedly also have met strong price resistance. However, it is at least probable that they would have made more immediate sense to small car owners.

VI. RECOMMENDATIONS

This chapter focuses on the future of re-introduction of airbags as an automotive option, and suggests some steps in developing a marketing strategy which could build on, and go beyond the GM experience of the mid-1970s. An excellent tactical outline for marketing air bags already exists in the form of the Coleman Contracts negotiated between NHTSA and various automobile manufacturers. The specific merchandising steps detailed in, for example, the Ford or GM contract can be used to implement a variety of marketing strategies; it is the development of the most effective strategy to which we now turn.

A. Consumers

The overriding need, in marketing airbags to consumers, is to create a totally positive view of the system before price enters into the equation. The GM experience proves that doubts and concerns play a critical role in consumer decisions not to buy what is already viewed as an expensive option; indeed, in many cases a skeptical attitude may be embraced as an excuse not to spend money which conscience might demand be spent if the system were a credible safety advance.

Certainly, at a bare minimum, this means an intensive probing of attitudes, particularly negative attitudes, toward air bag systems, preferably through the use of qualitative techniques such as group or family depth interviewing which allow researchers to get past surface rationalizations. Much of what will be found is probably already known; some of it appears in this report. Even so, our own experience in carrying out air bag research both for the government and for commercial clients suggests that there are still new concerns, new sources of doubt which emerge, and that minor variations in stimuli (pictures, films, concept statements) may elicit unexpected reactions.

This kind of diagnostic research is necessary but not sufficient for developing a real marketing strategy for air bags. Such a strategy requires the identification of the most likely prospects for air bags, and the promotional themes to which they will best respond.

It is by now a marketing truism that markets are segmented, and that very few products can be sold on an "all things to all people" basis. Presumably this is true for air bags as well. Although GM's market research provides some data about the

demographic singularities of ACRS buyers, there are no data on the type of buyer to whom the concept most appeals. Is the air bag prospect someone with a strong safety orientation, someone who sees driving as an anxiety-provoking, dangerous experience? Or is he (or she) an innovator, an early adopter of anything new who gets pleasure out of being "the first on the block" with something? Or is he (or she) the kind of person who is fascinated with high-tech gimmicks, someone who gets pleasure out of participating in and understanding a new technology? Is the air bag prospect someone who drives a lot or a little, someone with children in the car or someone who drives alone?

Finding out who the air bag prospects are moves us much of the way toward understanding what to tell them about the system, and what kinds of information will go past them, or even irritate them. It is possible, for example, that innovators may view themselves as adventurous types, and be repelled by too strong an emphasis on safety and security.

In addition to diagnostic and strategic research, the GM experience argues strongly for intensive pretesting of merchandising materials and perhaps even sales techniques. Knowing what concerns potential buyers is only a start; we need to know whether some concerns are best addressed directly, or obliquely. We need to know who is the most credible source of information -- does it matter if, say, a statement about air bag reliability comes from a government agency, an insurance company, the automobile manufacturer, or the National Safety Council?

An additional communications object which should be subjected to pretesting has to do with post-crash costs. The cost and effort involved in repairing a deployed bag was a significant discourager of interest in ACRS. In part, this is because very few people spontaneously see this as part of the vehicle repairs which their insurance will cover. If an understanding of the cost and time involved in repairing the air bag system after deployment in a crash can be communicated to consumers, along with the relationship of insurance costs and payments, it could neutralize a significant marketing problem.

There are a variety of research designs which might be fruitfully used in meeting these objectives. As noted above, the initial diagnostic research is best carried out using qualitative research techniques, and this is also true for the pretesting of merchandising material just discussed. It might be useful, as an intermediate step, to consider a panel survey design to:

- Quantify the appeals and barriers identified in the initial qualitative research

- Segment auto purchasers by attitudes toward air bags in order to identify key prospects and "tough sells"

- Prescreen promotional materials prior to final fine-tuning using qualitative techniques

This would involve contacting a reasonably large (e.g., over a thousand) sample of car owners in order to secure information on car ownership and use, other product ownership and use, attitudes toward innovation, attitudes toward safety and air bags, life-style information, and personal and household demographics.

Using multivariate statistical techniques, pro- and anti-air bag segments can be identified along with the appeals and/or barriers which place them in such a category. Selection of one or more segments as marketing targets would be used as a basis for generating promotional material, which could be as simple as concept statements, or as elaborate as a finished brochure or ad. Materials would also attempt to defuse some of the concerns which even the most enthusiastic consumers may share with the less enthusiastic.

After a period of time, the sample would be recontacted with the promotional materials developed (perhaps in several versions, for subsets of the sample) in order to determine the extent to which positive attitudes are reinforced and negative attitudes either changed or neutralized.

B. Technical Research

In addition to market research, there are also a number of technical issues which emerged in the mid-70s as barriers, and which should be addressed by engineering and design staffs. For example, it would be very advantageous to develop an air bag system which would work with a tilting and telescoping steering wheel, if this has not already been done. There are two other areas which could be given high priority:

1. Visibility

It is clear that a major drawback of the ACRS, from both a customer and dealer standpoint, was its relative invisibility. Although ACRS had a unique steering wheel and dashboard, there was no way to tell, short of being told, that the steering wheel

looks that way because it contains an air bag. For the same reason, an ACRS demonstrator was of little sales value to a dealer, because he could do nothing with it other than to point out how normal it looks. Actually, if it turns out that innovators or gimmick-oriented consumers are the best target markets for air-bags, a normal appearance may be a drawback.

Thus, the imperative is to find some way to dramatize the presence of the air bags, to the point where it becomes possible to think about it having some "toy value," and to the point where an air bag demonstrator becomes valuable to a dealer. This is probably a task more suited to the talents of an industrial designer rather than an engineer. It may involve a clear plastic panel over the bag, or an access hatch, or special vehicle trim and badging for air bag cars, or something completely different, but it needs to be done.

2. Assurance

Perhaps linked to the first point is the need for some sort of credible assurance that the air bag is ready to go into action when it is needed. GM used a dashboard light to indicate the operation of a self-check circuit, and Mercedes-Benz plans a similar indicator. However, judging from what salesmen heard, and what consumers in our group depth interviews said, that in itself is not sufficiently reassuring. The ideal form of assurance, from the consumer point of view, would be some way to directly access the bag mechanism rather than relying on an intermediary reporting mechanism. Recognizing the impossibility of such direct access with existing air bag technology poses a challenge to develop some more imaginative way of dramatizing the bag's readiness for action. This will be of particular importance as air bag cars age and enter the used car market where they must be able to hold their resale value if a viable market for new air bag cars is to emerge. An example of an assurance system could be an audio/visual display on the instrument panel which systematically checked each air bag system component each time the engine was started or whenever the driver desired to check the system.

C. Dealers

The critical role played by dealer attitudes in shaping the ACRS selling experience demands that future air bag marketing strategies take dealers and sales personnel into account.

The first requirement is to understand how various types of car dealers feel about air bags in general, and about air bags as a source of revenue. Ultimately, this should be quantified, particularly so that the relationship between "dealer demographics" like metro or rural location, single-franchise or multi-franchise, sales volume, fleet and leasing business etc., can be linked to dealer attitudes. However, at least initially, some qualitative research would be useful in order to obtain an initial orientation to the scope and intensity of dealer concerns. Some of the issues to be examined include:

- Extent of dealer fear or skepticism about air bags
- Non-GM dealer perceptions of the ACRS offering
- To whom would they present air bags, and to whom would they avoid marketing the system?
- Under what circumstances would they market it?
  - What would be necessary in terms of money, financing, delivery time, and divisional or corporate backup to make them seriously consider stocking air bag cars?
  - How credible and effective are the few ACRS dealer success stories which turned up in this project?

The decision to sell air bag cars might be probed either qualitatively or quantitatively by using scenarios to obtain dealer reactions. The initial qualitative research suggested could prove useful in working through unrealistic wish lists to get to reasonable possibilities in terms of policies regarding demonstrators, salesperson spiffs, floor planning, etc.

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